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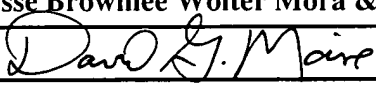
Approved for use through 07/31/2006. OMB 0651-0031

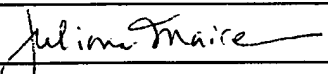
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/744,967
	Filing Date	02/09/2004
	First Named Inventor	Samuel R. Mollet
	Art Unit	3617
	Examiner Name	McCarry Jr., Robert J.
Total Number of Pages in This Submission	Attorney Docket Number	121029-4 (383)

ENCLOSURES (Check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input checked="" type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): 1. Post Card
<input type="checkbox"/> Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	Beusse Brownlee Wolter Mora & Maire, P.A.		Customer No. 29391
Signature			
Printed name	David G. Maire		
Date	November 1, 2005	Reg. No.	34,865

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:			
Signature			
Typed or printed name	Juliana Maire	Date	11/1/05

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).**FEE TRANSMITTAL**
For FY 2005☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT** (\$) **500.00****Complete if Known**

Application Number	10/774,967
Filing Date	02/09/2004
First Named Inventor	Samuel R. Mollet
Examiner Name	McCarry Jr., Robert J.
Art Unit	3617
Attorney Docket No.	121029-4 (383)

METHOD OF PAYMENT (check all that apply)☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____☒ Deposit Account Deposit Account Number: 07-0846 Deposit Account Name: General Electric Company

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☐ Credit any overpayments**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims	Fee (\$)	Fee Paid (\$)
- 20 or HP =	x	=				
HP = highest number of total claims paid for, if greater than 20						
Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)			
- 3 or HP =	x	=				
HP = highest number of independent claims paid for, if greater than 3						

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	/ 50 =	(round up to a whole number) x	=	

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other: Filing an Appeal Brief (Fee Code 1402/2402)

Fees Paid (\$)

500.00

SUBMITTED BY

Signature	<i>David G. Maire</i>	Registration No. (Attorney/Agent) 34,865	Telephone 407-926-7704
Name (Print/Type)	David G. Maire	Date	11/1/2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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10/774,967

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GROUP 3600

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Samuel R. Mollet, et al.

Group Art Unit: 3617

Serial No.: 10/774,967

Examiner: McCarry Jr., Robert J.

Filed: 02/09/2004

Title: REMOTE MONITORING OF RAIL LINE WAYSIDE EQUIPMENT

Attorney Docket: 121029-4 (383)

Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANT'S BRIEF UNDER 37 CFR 41.10

This brief is submitted in furtherance of the Notice of Appeal filed in this application on September 13, 2005.

The required fee under 37 CFR 41.20(b)(2) is authorized to be charged to the assignee's Deposit Account 07-0846 in accordance with the attached Fee Transmittal form.

1. REAL PARTY IN INTEREST - 37 CFR 41.37(c)(1)(i)

The real party in interest in this Appeal is the assignee of the present application, General Electric Company, a corporation of the State of New York.

2. RELATED APPEALS AND INTERFERENCES - 37 CFR 41.37(c)(1)(ii)

There is no other appeal, interference or judicial proceeding that is related to or that will directly affect, or that will be directly affected by, or that will have a bearing on the Board's decision in this Appeal.

3. STATUS OF CLAIMS - 37 CFR 41.37(c)(1)(iii)

Claims cancelled: none.

Claims withdrawn but not cancelled: none.

Claims pending: 1-31.

Claims allowed: none.

Claims rejected: 1-31.

The claims on appeal are 1-31.

4. STATUS OF AMENDMENTS - 37 CFR 41.37(c)(1)(iv)

No amendment was filed after the Final Rejection contained in the Office Communication mailed on 06/14/2005.

5. SUMMARY OF THE CLAIMED SUBJECT MATTER- 37 CFR 41.37(c)(1)(v)

As best illustrated in FIG. 5 of the application, this invention relates generally to the remote monitoring of rail line wayside equipment (132). Each of the independent apparatus claims 1, 12 and 21 and independent method claims 23 and 31 includes the concept of utilizing a communications path that conveys information from the wayside location to a remote location via a train locomotive (145) passing by the wayside equipment. The communications path includes a first communications link (164) that transmits information from the wayside to the passing locomotive, and a second communications link (166) that transmits the information from the locomotive to locations remote from the wayside equipment, such as via a connection to the Internet (150).

An example of wayside equipment is the crossing signal (10) illustrated in FIG. 1 and described in the specification at page 3, line 25 through page 4, line 5. A monitoring system (40) for evaluating the operation of the wayside equipment is illustrated in FIG. 2 and described in the specification at page 4, line 6 through page 6, line 24.

The communications link (74) that includes a pathway through the locomotive is described in the specification at page 7, line 13-22, and page 11, line 4 through page 12, line 10.

6. GROUNDS OF REJECTION TO BE REVIEWED UPON APPEAL - 37 CFR 41.37(c)(1)(vi)

The Appellants request the review of the rejection of claims 1, 2 and 4-31 under 35 USC 103(a) as being unpatentable over Ehrenberger (US 5,785,283) in view of Cardella (US 6,480,810), as well as the rejection of claim 3 under 35 USC 103(a) as being unpatentable over Ehrenberger in view of Cardella and further in view of Pace (US 5,954,299).

7. ARGUMENT 37 CFR 41.37(c)(1)(vii)

(A) The appellants' first argument applies to all of the claims 1-31. Independent claim 1 may be considered to be representative of this group of claims for the purposes of this first argument only. The appellants argue that all of the rejections under 35 USC 103(a) are defective because there is no basis in the art for combining the teachings of Ehrenberger and Cardella.

MPEP 2143.01 provides that the mere fact that references can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). The appellants submit that there is no incentive to combine the teachings of Ehrenberger and Cardella, and therefore, there is no *prima facie* case for obviousness. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. *ACS Hospital systems, Inc. v. Motefiore Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

Ehrenberger discloses a system and method for communicating operational status information related to wayside equipment to a passing locomotive. Ehrenberger acknowledges that it is known to transmit such operational status information directly

from the wayside equipment to a remote control center. (column 1, lines 25-27) Ehrenberger also acknowledges that it is known to transmit information from a remote control center to a locomotive. (column 2, lines 45-53) Ehrenberger provides no incentive for investigating alternative communication paths between the wayside equipment and a remote control center, since he is concerned only with the reliability of communication between the wayside equipment and the passing locomotive. A person skilled in the art at the time of the present invention would find no suggestion in Ehrenberger of a need for an improved communication link between wayside equipment and a remote control center. Ehrenberger teaches away from a combination with Cardella to achieve the claimed two-link communication path because Ehrenberger teaches the replacement of a two-link communication path (1 - wayside to remote center, plus 2 - remote center to locomotive) with a single-link communication path (wayside to locomotive).

Cardella describes a process for diagnosing operational data from the locomotive. Only locomotive data is transmitted from the locomotive to the remote site in the system of Cardella. Cardella makes no mention of wayside equipment, and thus he can provide no motivation for an improved wayside equipment monitoring system or method. Cardella actually teaches away from a combination with Ehrenberger because Cardella describes a satellite link, which is not directly compatible with the VHF and UHF radios described in Ehrenberger.

Accordingly, a person skilled in the art at the time of the present invention would derive no motivation from either Ehrenberger or Cardella for a combination of these two references, and thus no case for *prima facie* obviousness has been established.

(B) The appellants' second argument applies specifically to dependent claims 6, 11, 14, 19, 22, 24, 25 and 28-31. The appellants argue that the rejections of these claims under 35 USC 103(a) are defective because each of these claims contains a limitation that is not taught or suggested in the cited prior art patents to Ehrenberger and Cardella.

Section 103 of the patent statute provides that "A patent may not be obtained ... if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter **as a whole** would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. (Emphasis added).

The following specific claim limitations are lacking in the cited prior art:

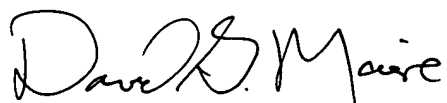
Claim #	Limitation
6	a sensor detecting an output of a human-observable annunciator
11, 22	the first communications link and the second communications link comprise <u>two-way</u> communication devices
14, 24	a polling signal generated from a location remote from the wayside location
19	the sensor is disposed on a railroad locomotive
25	processing the signal at the wayside location to generate information; and transmitting the information to a database remote from the wayside location
28	populating a failure database when the information is indicative of a failure of the equipment
29	populating a report from the failure database
30	transmitting the information from the locomotive to a location remote from the wayside location via a communication link also used for transmitting information regarding an operating status of the locomotive to a data center
31	sensing the operation of an annunciator for railroad grade crossing equipment at a grade crossing location in response to a railroad locomotive passing the grade crossing location; generating information responsive to the sensed operation and indicative of an operating status of the annunciator; transmitting the information from the grade crossing location to the railroad locomotive; and transmitting the information from the railroad locomotive to a location remote from the grade crossing location.

In the response filed under 37 CFR 1.111 on April 21, 2005, the Appellants specifically requested the Examiner to provide the figure number and/or column and line references for the teaching of such limitations. However, no such information was provided in the Examiner's Response to Arguments contained in the Final Rejection paper, thereby lending credence to the Appellants' position that there are no such teachings in the cited prior art.

8. APPENDICES

A claims appendix containing a copy of the claims involved in this appeal is provided herewith in accordance with 37 CFR 41.37(c)(1)(viii). The evidence appendix provided in accordance with 37 CFR 41.37(c)(1)(ix) contains no evidence because no such evidence is relied upon by the appellant in this appeal. The related proceedings appendix provided in accordance with 37 CFR 41.37(c)(1)(x) contains no citations because no such related proceeding is identified herein under 37 CFR 41.37(c)(1)(ii).

Respectfully submitted,

A handwritten signature in black ink that reads "David G. Maire". The signature is written in a cursive, flowing style.

David G. Maire, Reg. No. 34,865

Beusse Brownlee Wolter Mora & Maire, P.A.
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APPENDIX OF CLAIMS ON APPEAL

37 CFR 41.37(c)(1)(viii)

1. An apparatus comprising:
circuitry generating information indicative of an operating status of rail line
wayside equipment;
a first communications link for communicating the information from a wayside
equipment location to a railroad locomotive; and
a second communications link for communicating the information from the
railroad locomotive to a location remote from the wayside equipment location.
2. The apparatus of claim 1, further comprising:
a database for receiving and storing the information at the remote location; and
a data processor associated with the database for processing the information.
3. The apparatus of claim 1, further comprising a solar power source for
providing energy to the circuitry at the wayside location.
4. The apparatus of claim 1, wherein the second communications link
comprises a wireless communication device also used to communicate locomotive
operating status information.
5. The apparatus of claim 4, further comprising:
a database receiving information from the wireless communication device for
receiving and storing the information; and
a data processor associated with the database for processing the information.
6. The apparatus of claim 1, wherein the circuitry comprises a sensor
detecting an output of a human-observable annunciator.

7. The apparatus of claim 1, wherein the circuitry comprises a hot box detector.

8. The apparatus of claim 1, wherein the circuitry comprises a dragging equipment detector.

9. The apparatus of claim 1, wherein the circuitry comprises a high/wide load detector.

10. The apparatus of claim 1, wherein the circuitry comprises an equipment identification detector.

11. The apparatus of claim 1, wherein the first communications link and second communications link comprise two-way communication devices for communicating between the remote location and the wayside location.

12. An apparatus comprising:
a sensor generating a signal responsive to an operating status of equipment located at a railroad track wayside location, with the equipment operating in response to passage of a railroad locomotive adjacent to the equipment;
circuitry responsive to the signal for generating information representing the operating status of the equipment;
a communications link for communicating the information to a database remote from the wayside location via the railroad locomotive; and
a data processor associated with the database for processing the information.

13. The apparatus of claim 12, further comprising testing circuitry for applying a test signal to the equipment to generate a desired operating status.

14. The apparatus of claim 12, wherein the testing circuitry is responsive to a polling signal generated from a location remote from the wayside location.

15. The apparatus of claim 12, wherein the data processor further comprises a report generator for generating a report responsive to the information.

16. The apparatus of claim 12, further comprising a notification routine operable by the data processor for providing a notification when the information satisfies a predetermined criterion.

17. The apparatus of claim 12, wherein the equipment located at the wayside location comprises one of the group of crossing warning equipment, wayside rail lubricator equipment, signal equipment, hot box detector equipment and switch machine equipment.

18. The apparatus of claim 12, wherein the sensor comprises one of the group of a current sensor, a voltage sensor, a light sensor, a mercury switch, a ground fault sensor, and an accelerometer.

19. The apparatus of claim 12, wherein the sensor is disposed on a railroad locomotive operating on the railroad track.

20. The apparatus of claim 12, wherein the communication link comprises a first communications link communicating the information from the wayside location to a vehicle operating on the rail line and a second communications link communicating the information from the vehicle to the database.

21. An apparatus comprising:

- circuitry for activating an annunciator at a railroad grade crossing location in response to the approach of a railroad train;
- a sensor for generating a signal responsive to the operation of the annunciator;
- circuitry responsive to the signal for generating information representing an operating status of the annunciator;
- a first communications link for communicating the information from the grade crossing location to the train;
- a second communications link for communicating the information from the train to a location remote from the grade crossing location;
- a database for receiving and storing the information; and
- a data processor associated with the database for processing the information.

22. The apparatus of claim 21, wherein the first communications link and second communications link comprise two-way communication devices for communicating between the remote location and the grade crossing location.

23. A method of monitoring the operation of railroad wayside equipment, the method comprising:

- sensing a condition of equipment located at a railroad track wayside location;
- generating information responsive to the condition indicative of an operating status of the equipment;
- transmitting the information to a locomotive operating on the railroad track; and
- transmitting the information from the locomotive to a location remote from the wayside location.

24. The method of claim 23, further comprising generating a polling signal from a location remote from the wayside location to cause the sensing, generating and transmitting steps to occur.

25. The method of claim 23, further comprising:
locating a sensor at the wayside location for generating a signal responsive to the condition;
processing the signal at the wayside location to generate the information; and
transmitting the information to a database located remote from the wayside location.

26. The method of claim 25, further comprising manipulating information in the database to populate a report.

27. The method of claim 25, further comprising automatically issuing an alert when the information is indicative of a failure of the equipment.

28. The method of claim 25, further comprising populating a failure database when the information is indicative of a failure of the equipment.

29. The method of claim 28, further comprising automatically populating a report from the failure database.

30. The method of claim 23, further comprising transmitting the information from the locomotive to a location remote from the wayside location via a communication link also used for transmitting information regarding an operating status of the locomotive to a data center.